

ORNITHOLOGICAL LITERATURE

STUDIES OF TROPICAL AMERICAN BIRDS. By Alexander F. Skutch. Publications of the Nuttall Ornithological Club, No. 10, Cambridge, Mass., 1972: $6\frac{1}{4} \times 9\frac{1}{4}$ in., vi + 228 pp., 15 photos, 2 tables. \$12.00. (Obtainable from the Nuttall Ornithological Club, c/o Museum of Comparative Zoology, Harvard Univ., Cambridge, Mass. 02138.)

I am certain that future ornithologists will be heaping praises upon Alexander Skutch long after most current, fashionable research endeavors are forgotten. In our ever more restricted environment, the depletion of avifaunas, particularly in tropical forest areas, makes it incumbent upon today's ornithologists to seek out, and study birds in their natural habitats. Indeed, I know of no more important responsibility facing us. Alexander Skutch has borne this responsibility, selflessly, for many of us, by dedicating the bulk of his life to field studies of neotropical birds. Whatever faults might be found with his behavioral interpretations, and whatever the gaps may be in his studies, his efforts have proved most fruitful and we are deeply in his debt. The present volume, his fifth of this type (in addition to many articles in scientific journals), contains life history observations of more than 50 species, including some not treated in separate accounts, but mentioned within sections dealing with related species.

Dr. Skutch's writing is eminently readable and flowing. One familiar with tropical forest birds perhaps will appreciate more than others the enthusiasm, stamina, and effort of the author, barely hinted at, or not suggested at all—the sitting motionless for many hours at a stretch (as watching a kingfisher's nest entrance, p. 92, "a sort of yogic exercise in the contemplation of nothingness"!), and at times in heavy rain or burning sun—is accepted without a hint of complaint by this dedicated researcher. The results of his observations in the present volume include 28 species accounts of birds representing six non-passerine and nine passerine families. Especially interesting to this reader, either because of the depth of coverage, the lack of previous information concerning the genus involved, or special interest were: the lengthy treatment of the Pauraque, coverage of no fewer than six hummingbirds of five genera (the longest section for any family in this book), the detailed accounts of the Ringed Kingfisher and the White-fronted Nunbird, the Shining Honeycreeper section, the observations of four tanagers (three genera), and the write-up of the Black-faced Grosbeak.

We learn many details from these accounts, and facts of diverse biological interests. A case of bigamy is described in detail for *Thraupis episcopus*, and occurrence of song dialects is suggested for populations of that tanager. The sometimes successful fly-catching (!) efforts of the large toucan *Ramphastos swainsonii* after winged termites are described. Dr. Skutch mentions (pp. 126–127) some instances of predation by this toucan on various nestling birds, and eggs, and he proposes that the large, usually brightly colored bill of toucans in general serves to intimidate (as a form of "supernormal stimulus") parent birds of other species defending their nests and young against the toucan. Another "supernormal stimulus" seems to be an oropendola's nest to a Piratic Flycatcher, which utilizes such (large) nests, but is unsuccessful in raising young in them. The White-fronted Nunbirds sing in choruses composed of an adult pair, and, apparently, other adults destined to be helpers-at-the-nest, for the author found three nests involving three or four adults apiece. The rate of feeding nestling hummingbirds at various stages is summarized in tabular form for no fewer than 10 species of nine genera. Dr. Skutch argues convincingly for the strong influence of

learning of song patterns in hummingbirds, based on studies of singing assemblies among 15 hummingbird species, and other data including the singing of a song and uttering of a call of *Amazilia tzacatl* by a male *Amazilia amabilis* that over the years fashioned from the song one more like that of its own species. A 48-hour incubation cycle is documented for the Ringed Kingfisher. Interspecific aggression seems to be the rule among dacnid honeycreepers such as *Cyanerpes lucidus*, which fights over food with other honeycreepers, but not with conspecific birds. Helpers were noted at nests of several species other than the nunbird mentioned above, including the grosbeak *Caryothraustes polioaster*—the author reemphasizes his view that helpers are much more prevalent in less territorial birds, and are uncommon in such territorial birds as finches. But I continue to stress the unusual, which could go on for some pages. Suffice to say that packed within this relatively small book are observations galore, some indeed unusual, giving us pause and perhaps forcing a reconsideration of views, and many others filling in details and extending by another species or even another genus our knowledge of the biology of various avian groups.

The text is essentially free of errors. Each account is adequately summarized, but the writing easily entices one to read through the accounts rather than skimming the summaries. The photographs are not of excellent quality, but are satisfactory generally (figure 14 is questionably satisfactory). Only two of the photographs grace the portion of the book treating passerine families. Scientific names of extraneous species are listed after the common names of these species in the Index, which covers only bird names, and, unfortunately, no subject headings. A criticism of the publications of this series is the failure to give the price of each book, or to include the prices for previous publications in the list on the back of the title page.

I recommended this book to all interested in avian biology. Hopefully, the stimulation of reading it will encourage others to share in the responsibility of extending our knowledge of neotropical birds beyond the foundation so ably, and all too largely laid by Alexander Skutch.—LESTER L. SHORT.

COMMUNICATION AND OTHER SOCIAL BEHAVIOR IN *PARUS CAROLINENSIS*. By Susan T. Smith. Publications of the Nuttall Ornithological Club, No. 11, Cambridge, Mass., 1972: 6¼ × 9¼ in., ix + 125 pp., 2 maps, many sonagrams. \$7.75. (Obtainable from the Nuttall Ornithological Club, c/o Museum of Comparative Zoology, Harvard Univ., Cambridge, Mass. 02138.)

W. J. Smith's (e.g. 1969) distinction between "message" and "meaning" brought important advances to the study of animal communication. Most previous investigators, and especially perhaps ethologists (with the notable exception of Andrew, 1951, 1961, 1972), had attempted to interpret signal movements and vocalizations in terms of major "drives" or "tendencies" such as attack, escape and sex, or in terms of conflict between them. W. J. Smith has shown, in effect, that this may involve attempts at analysis at too high a level. For instance, the "Locomotory Hesitance Vocalization" of tyrannid flycatchers is used in a wide variety of situations that involve locomotion in conflict with some other tendency, no matter whether that locomotion is likely to lead to attack or food. Many signals are used in a similar variety of situations, and the state of the sender that they describe (i.e. the "message") can be deduced only by abstracting those features of its behavior that are common to all the situations.